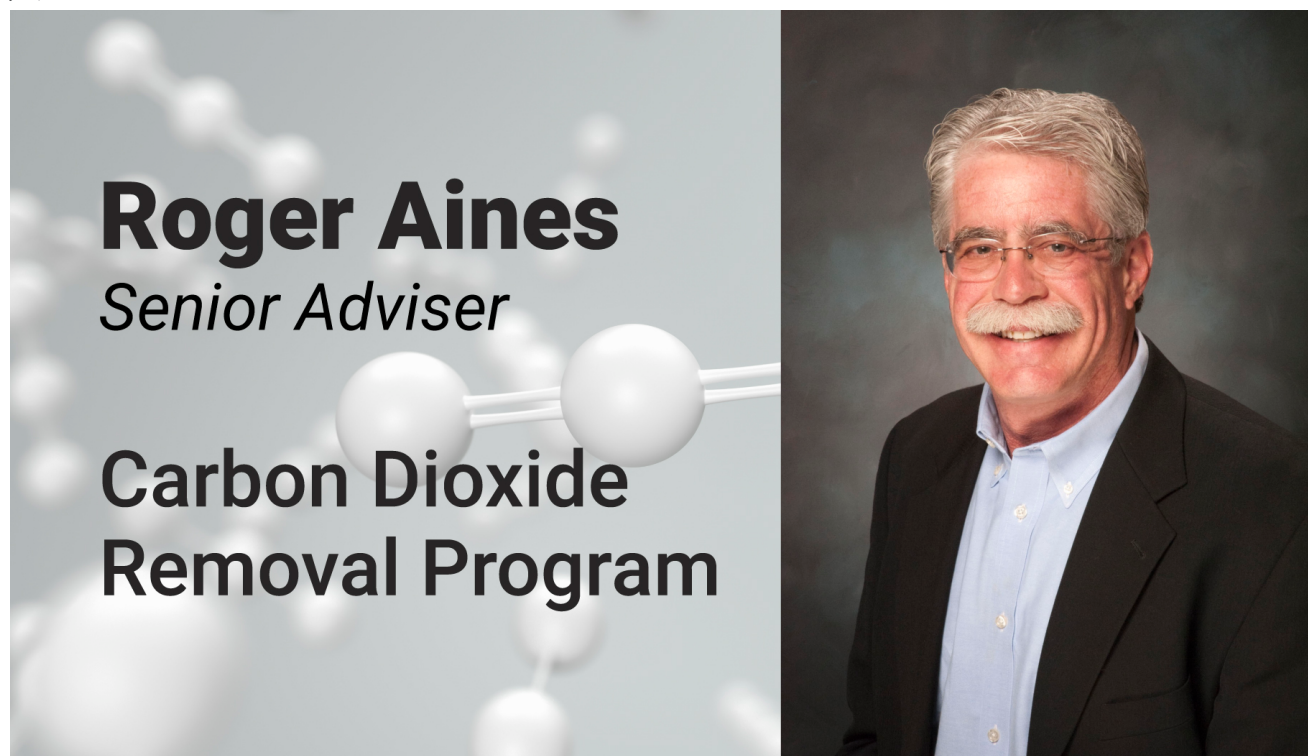


Aines heads to DOE to advise on carbon dioxide removal

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LLNL's Energy Programs chief scientist Roger Aines has taken on a one-year, remote offsite assignment as the senior adviser for the Carbon Dioxide Removal (CDR) program under Geri Richmond, DOE Under Secretary for Science and Innovation.

He will coordinate and collaborate on cross-cutting efforts on the Carbon Negative Shot (CNS). CNS is the U.S. government's first major aligning objective for research, development and deployment of CDR. He will serve as a subject-matter expert and provide technical advice and guidance to the Under Secretary program portfolio to support the advancement of technologies to reduce carbon emissions and other environmental impacts of fossil fuel production and use, particularly the hardest-to-decarbonize applications in the electricity and industrial sectors.

"This is a battlefield promotion – unexpected and sudden, and not something I could turn down," Aines said. "It's a huge challenge. It's a big opportunity and I'm looking forward to it. My goal is to make things better than they are today."

Trained as a geochemist, Aines led LLNL's Carbon Fuel Cycle Program and has been responsible for managing and leading the Carbon Initiative, which aims to understand, develop and implement technologies for the removal of carbon dioxide from the atmosphere: so-called negative emissions technologies. The Lab's Jennifer Pett-Ridge will now lead the Carbon Initiative.

While on assignment, Aines will continue to mentor and advise the Carbon Initiative team. "I have never had a more fulfilling job than leading the team," Aines said. "Their intensity and dedication to doing the right thing is remarkable. Every day I wake up and think, 'This team is changing the world. And every day they increase that impact. I could not be prouder of a team or their accomplishments. Thank you for sharing your careers and visions with me. Your devotion, brains and passion can, and will, solve the climate crisis.'"

Aines was key in the Lab's pivotal report "[Getting to Neutral: Options for Negative Carbon Emissions in California](#)." The report helped launch LLNL as a trusted adviser in the discussion of how to remove carbon dioxide from the air.

His career has involved a close coupling of scientific research, engineering, field demonstration and assessment of future development needs for technology. Research interests include the chemistry of natural and engineered processes, including carbon dioxide separation and water treatment. Current research includes the application of 3-D printing to chemical reactors and gas separations, development of catalysts for carbon dioxide capture, management of pressure in geologic sequestration through brine withdrawal, and treatment and encapsulation of carbon dioxide capture solvents.

Aines previously led LLNL's Carbon Management Program, which took an integrated view of the energy, climate and environmental aspects of carbon-based fuel production and use. It supported DOE projects in sequestration technology development for capture and carbon recycling.

He earned his bachelor's degree in chemistry from Carleton College and his Ph.D. in geochemistry from the California Institute of Technology. With Amy Aines, he authored the recently released "Championing Science," a book that helps scientists communicate more effectively with decision makers.